



PvuI (7)
SgfI (6) 1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGTGCTGTACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC

HindIII (245)
Psp1406I (203) 201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTCACGCGCCGCCCTACCTGAGGCC

301 GCCATCCACGCCGGTTGAGTCGCGTTCTGCCGCTCCCGCTGTGGTGCTCCTGAACTGCGTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTCTCAACTCTACGCTTTTGTTCGTTT

BstEII (555)
AgeI (552) 501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTCACCATGGCGGTGCAGGTGGTGCAGGCGGTGCAGGCGGTTCA

NcoI (560) 1▶ M A V Q V V Q A V Q A V H

XhoI (601) 601 TCTCGAGTCTGACGCTTCTCTCGTTTGTCTCAACCACGCTCTGAGCACAGAGAAGGAGGAAGTAATGGGGCTGTGCATAGGGGAGTTGAACGATGATACA

13▶ L E S D A F L V C L N H A L S T E K E E V M G L C I G E L N D D T

FspI (737) 701 AGGAGTACTCCAAATTTGCATATACTGAACTGAAATGCGCACAGTTGCTGAAAAGTTGATGCCGTGAGAATTGTTACATTCTTCTGTATCATCT

47▶ R S D S K F A Y T G T E M R T V A E K V D A V R I V H I H S V I I

PstI (854)
PvuII (847) 801 TACGACGTTCTGATAAGAGGAAGGACCGAGTAGAAATTTCTCCAGAGCAGCTGTCTGCAGCTTCAACAGAGGCAGAGAGTTGGTGAACGACAGGCCG

80▶ L R R S D K R K D R V E I S P E Q L S A A S T E A E R L A E L T G R

XcmI (902) 901 CCCATGAGAGTTGTGGGCTGGTATCATTCCCATCCTCATATAACTGTTTGGCCTTACATGTTGATGTTGCGACACAAGCCATGTACCAGATGATGGAT

113▶ P M R V V G W Y H S H P H I T V W P S H V D V R T Q A M Y Q M M D

1001 CAAGGCTTTGTAGACTTATTTTTCTGTTTCATAGAAGATAAGAACACAAAGACTGGCCGGTACTCTACACTTGTCCAAATCCATACAGGCCAAA

147▶ Q G F V G L I F S C F I E D K N T K T G R V L Y T C F Q S I Q A Q

XcmI (1123) 1101 AGAGTTCAGAGTCCCTTCATGGTCCACGAGACTTCTGAGCTCCAGCCAGCACATCTCCATTGAGGGCCAGAAGGAAGGAAAGGTATGAGAGAATCGA

180▶ K S S E S L H G P R D F W S S S Q H I S I E G Q K E E E R Y E R I E

1201 AATCCCAATCCATATTGTACCTCATGTCACTATCGGAAAAGTGTGCCTTGAATCAGCAGTAGAGTGCCTCAAGATCCTGTGCCAGGAGGAGCAGGATGCG

213▶ I P I H I V P H V T I G K V C L E S A V E L P K I L C Q E E Q D A

BamHI (1307) 1301 TATAGGAGGATCCACAGCCTTACACATCTGGACTCAGTAACCAAGATCCATAATGGCTCAGTGTTTACCAAGAATCTGTGCAGTCAGATGTCGGCAGTCA

247▶ Y R R I H S L T H L D S V T K I H N G S V F T K N L C S Q M S A V

SapI (1477) 1401 GCGGGCTCTCCTACAGTGGTTGGAGGACAGACTGGAGCAAAACAGCATTGTCAGGAATTACAACAAGAAAAGGAAAGCTTATGCAAGAACTTTC

280▶ S G P L L Q W L E D R L E Q N Q Q H L Q E L Q Q E K E E L M Q E L S

MscI (1543)
XbaI (1503) 1501 TTCTCTAGAATAAATCAGGAGACAAAATGGGAAAGAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAAATGCAG

313▶ S L E •

NheI (1537)

HpaI (1675) 1601 TGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAGTTAAACAACAACCTGCATTCAAT

MfeI (1686)

EcoRI (1771) 1701 TTATGTTTCAGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTTAAATACAGCATAGCAAACTT

1801 TAACCTCAAATCAAGCCTCTACTTGAATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCT

SapI (1953) 1901 CACCTTCTTTCATGGAGTTAAGATATAGTGTATTTTCCCAAGTTTGAACAGCTCTTCATTCTTTATGTTTAAATGCACTGACCTCCACATTTCC

SspI (2010) 2001 TTTTGTAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAATAAATGTTTTTATTAGGCAGAAATCCAGATGCTCAAGGCCCTCATAATA

SwaI (2024) 2101 TCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTAAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGA

EcoO109I (2085) 141◀ • N R T Y K L

2201 GGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACAT

134◀ P I L E E I T T K V L K G N M E I L V F C D P A Y D S I L E R C M

2301 **BstXI (2314)**
GCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCGTTGCTCACA
101 G C P S V V R I S R D V E D S Y P H R V A V I T D F D K Q G N S V

2401 **StuI (2449)**
GCAGACCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGG
67 A S G I A I A E A C V T V R G I Y A E I H V A S I I E G T K T R I A

2501 **BbsI (2595)**
XmnI (2591)
CCGCCCCGACATGGTGTCTTGTCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTT
34 A G V H H K N D E Y L M T I K E T A V E V L E L D Q Q S I N F T K

2601 **AseI (2657)**
CATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTG
1 M
2701 ACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTCGCTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAG

2801 **SpeI (2812)**
TCCCGTTGATTTACTAGTCAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGT

2901 **SnaBI (2940)**
ACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCCATAAAGTCATGTACTGGGCATAATGCCA

3001 **NdeI (3045)**
GGCGGGCATTACCCTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACCTTGATGTACTGCCAAGTGGGCGAGTTACCCTAAATACTCCACC

3101
CATTGACGTCAATGAAAAGTCCCTATTGGCGTACTATGGAAACATACGTCAATTATTGACGTCAATGGGCGGGGTCGTTGGCGGTGAGCCAGGCGGGC

3201 **PaeI (3231)**
PstI (3224)
SdaI (3223) **BspLU11I (3241)**
CATTACCCTAAGTTATGTAACGCTGCAGGTTAATAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGCCGCTTGTGGCG
3301 TTTTCCATAGGCTCCGCCCTGACGAGCATCACAAAAATCAGCGCTCAAGTCAGAGGTGGCAAACCCGACAGGACTATAAAGATACCAGGCGTTTC
3401 CCCCTGGAAGCTCCCTCGTGGCTCTCCTGTTCCGACCCTGCCCTTACCGGATACCTGTCCGCTTCTCCCTTCGGAAGCGTGGCGCTTCTCATAG

3501 **ApaLI (3555)**
CTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTCCAGCCGACCCTGCGCCTTATCCGGT
3601 AACTATCGTCTTGAGTCAAACCCGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGTTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTA
3701 CAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGG
3801 TAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCT

3901 **EagI (3991)**
PaeI (3971) **SwaI (3980)** **NotI (3990)**
TTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGCCGCAA
4001 TAAAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTGTGTGAATCGTAACATAACGCTCTCCATCAAACAAAACGAAACAAAACAACTA
4101 GCAAAATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA